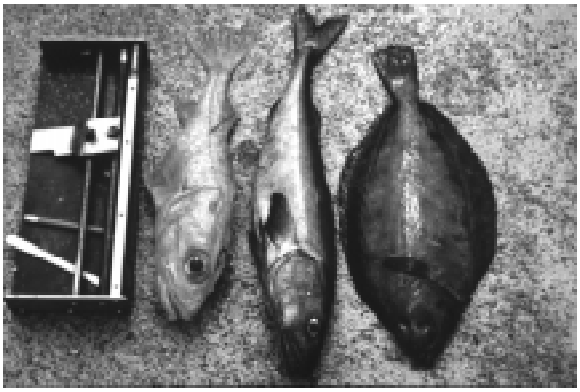
Improving assessments of West Coast groundfish



Problem Statement

Scientists from the Northwest Fisheries Science Center (NWFSC), fishing industry leaders, state agencies, and conservationists are increasingly concerned about the sustainability of the West Coast groundfish fishery valued at some $100 million annually. A major objective of the National Marine Fisheries Service (NMFS) is to maintain healthy, sustainable fish stocks important to commercial, recreational, and subsistence fisheries. Yet the abundance of several important rockfish species has declined alarmingly, and there is a dangerous level of uncertainty about the status of many other species. The collapse of the New England groundfish fishery off Georges Bank in the early 1970s is an ominous reminder of the devastating consequences of poor management on a fishery and a regional economy.

The year-round availability of groundfish to domestic and export markets is due largely to stringent harvest quotas set by the Pacific Fisheries Management Council. These quotas are based on multispecies stock assessments provided by the NMFS as part of its mandate under the Sustainable Fisheries Act to provide the best available scientific information on which to base management decisions. The NWFSC has front-line responsibility for these complex stock assessments—involving a wealth of data from trawl surveys, life-history studies, fishery statistics programs, climate and ecological factors—that are used to calibrate models of groundfish population dynamics. These models generate estimates of current and past abundance trends and total fishery catch. They make it possible to set ranges of allowable catch aimed at both preventing overfishing and achieving optimum yield.

There is strong consensus that the breadth and precision of assessments must be enhanced if they are to fill the information gaps that hinder fully informed, risk-averse decision making regarding this valuable resource.

Critical Factors

- Statistical certainty of assessments must be increased through more frequent and species-inclusive surveys, through the integration of all relevant fishery data (e.g., logbooks), and by expanding the scope of assessment models to include factors such as bycatch and discard mortalities and information from socioeconomic analyses.

- Collaboration between federal and state governments, industry, and universities has become an urgent requirement in collecting the required information, and in effectively utilizing industry expertise, vessels, and logbook data.

- The absence of a dedicated fishery research vessel for the West Coast is a major obstacle to developing a long-range groundfish survey plan.

Status of Research

Scientists from the Northwest Fisheries Science Center have the lead in providing better data for groundfish stock assessments and improving critical scientific assumptions in those assessments. Center scientists have developed new statistical methods to calibrate fishery logbook information for use in stock assessments. Since 1997, scientists from this program have conducted assessments for sablefish, Dover sole, and thornyheads. In cooperation with Oregon State University (OSU) and the University of Washington (UW) and with the use of cooperating industry vessels, NWFSC scientists are measuring the biological parameters crucial to the West Coast sablefish stock assessment as well as mortality of discarded bycatch. The Center has provided funding to the Oregon Department of Fish and Wildlife to create a cooperative groundfish age-reading staff. In collaboration with a UW scientist and with trawl experts from Alaska Fisheries Science Center, NWFSC scientists developed methods to calibrate trawling vessels, gear, trawl net operations, and crew training for cooperative NMFS/industry surveys. In cooperation with OSU, the NWFSC is exploring means to improve communication and cooperation with industry.

Future Considerations

Concerns about the health and abundance of the West Coast groundfish fishery are expected to intensify in the years ahead, along with a growing likelihood of allocation battles among recreational, commercial, and tribal fisheries. Heading off a disaster will require the most comprehensive and precise information possible to form the basis for wise and proactive management decisions. Because annual harvest guidelines set by the Council can have enormous impacts on the Northwest region's fishing industry and overall economy, it is crucial that government and university scientists and fishing industry leaders pool resources to increase the reliability of assessment data.

Key Players

Fishery Resource Analysis & Monitoring (FRAM) Division, NWFSC
Alaska Fisheries Science Center, NMFS
Southwest Fisheries Science Center, NMFS
Pacific Fishery Management Council
Pacific States Marine Fisheries Commission
Oregon and Washington Departments of Fish and Wildlife
Oregon State University and University of Washington
Oregon Trawl Commission and Coast Draggers Association
Fishermen's Marketing Association and Midwater Trawlers Cooperative

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